UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/814,731 | 03/31/2004 | Yoram Ofek | OFE 1854 | 9871 |

20787 7590 12/30/2008

SITRICK & SITRICK
8340 N LINCOLN AVENUE SUITE 201
SKOKIE, IL 60077

| EXAMINER | |
|---|---|
| DAGLAWI, AMAR A | |
| ART UNIT | PAPER NUMBER |
| 2618 | |
| MAIL DATE | DELIVERY MODE |
| 12/30/2008 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/814,731 | OFEK ET AL. | |
| | Examiner | Art Unit | |
| | AMAR DAGLAWI | 2618 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-57 are rejected under 35 U.S.C. 102(e) as being anticipated by De Champlain et al (US 6,587,080 B1).

With respect to claim 1, De Champlain teaches A wireless system for transmitting and receiving a plurality of data packets, the system comprising:

a plurality of directional antenna sectors each having a respective associated three-dimensional region of space for transmitting and receiving electromagnetic signals (Fig.3, col.13, lines 43-67, col.14, lines 40-67), at least one receiving controller (Fig.7, 186) and at least one transmitting controller (Fig.7)

wherein at least one of said receiving controllers is selectively coupled to at least one of the directional antenna sectors to measure received electromagnetic signal characteristics (col.16, lines 15-67, col.17, lines 1-67);

wherein at least one of said receiving controllers selects at least one of the directional antenna sectors prior to the transmission of at least one data packet responsive to the received electromagnetic signal characteristics (Fig.7, Fig.2, col.16, lines 15-67, col.17,

lines 1-67, col.6, lines 5-67, col.7, lines 1-67); and

wherein at least one of said transmitting controllers is selectively coupled. to at least one of the directional antenna sectors in order to transmit at least one data packet via the directional antenna sectors selected by said selected one of said at least one receiving controller (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 2, De Champlain further teaches wherein a selected one of said at least one receiving controller is selectively coupled to selected ones of the directional antenna sectors in a defined order in order to measure received electromagnetic signal characteristics (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 3, De Champlain further wherein a selected one of said at least one receiving controller prior to the transmission of at least one data packet selects at least one of the directional antenna sectors within a first defined time interval responsive to the received electromagnetic signal characteristics (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 4, De Champlain further teaches wherein a selected one of said at least one receiving controller selects at least one of the directional antenna sectors within an order dependent upon the history of the received electromagnetic signal characteristics prior the transmission of at least one data packet (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 5, De Champlain further teaches the plurality of directional antenna sectors are part of at least one of: a mobile device, a laptop computer, a desktop computer, a personal digital assistant (PDA), a cordless phone, a wireless phone, a cellular phone, a 2.5G cellular phone, a 3G device, a 4G device, a 5(} device, a multimedia device, a GPS (global positioning system) receiver, an electronic book, electronic paper, an automotive, a boat, a ship, an airplane, a train, a satellite, a hand-held device, a base station, an access point, an access router, a UAV (unmanned aerial vehicle), and a packet switch output (Fig.7).

With respect to claim 6, De Champlain further teaches the receiving controller is part of at least one of: a mobile device, a laptop computer, a personal digital assistant, a cordless phone, a wireless phone, voice-over IP, a RFID (radio frequency identifier), a cellular phone, a 2.5G cellular phone, a 3(3 device, a 4G device, a 5G device, a multimedia device, a GPS (global positioning system) receiver, an electronic book, electronic paper, and a packet switch (Fig.7)

With respect to claim 7, De Champlain further teaches at one of the plurality of directional antenna sectors are polarized antennas each polarized antenna sector transmits an electromagnetic signal in defined polarization (col.13, lines 40-67, col.14, lines 1-67).

With respect to claim 8, De Champlain further teaches each directional antenna sector transmits in a defined direction that is defined by physical construction of the respective directional antenna sector (col.13, lines 40-67, col.14, lines 1-67).

With respect to claim 9, De Champlain further teaches each said directional antenna sector is associated with a respective transmission region in three-dimensional space and wherein the respective transmission regions in three dimensional space are overlapped within defined parts three-dimensional space (Fig.3, col.13, lines 40-67, col.14, lines 1-67).

With respect to claim 10, De Champlain further teaches the respective transmission regions in three-dimensional space are defined with accordance to 3b power lobes (Fig.3, col.13, lines 40-67, col.14, lines 1-67).

With respect to claim 11, De Champlain further teaches the selected one of the directional antenna sectors are steered antennas receive and transmit electromagnetic signals within a defined region in at least one of two-dimensional space and three dimensional space (Fig.3, col.13, lines 40-67, col.14, lines 1-67).

With respect to claim 12, DE Champlain further teaches the steered antennas sectors are moveable by at least one of a step-motor, an electric motor, and electric field, magnetic field, and phase array (Fig.3, col.13,lines 40-67, col.14, lines 1-67).

With respect to claim13, De Champlain further teaches in a predefined pattern; and wherein the predefined pattern is at least one of: polyhedron, polygon, octahedron, pentagon, cube, pyramid, sectorized cylinder, ball, pentagondodeeahedron (Fig.3, col.13, lines 40-67, col.14, lines 1-67).

With respect to claim 14, De Champlain further teaches a plurality of receiving controllers comprising a switch and selected ones of the receiving controllers are

selectivley coupled to selected ones of the directional antenna sectors utilizing the receiving switch (Fig.7, Fig.4, col.15, lines 1-67).

With respect to claim 15, De Champlain further teaches the receiving switch is constructed utilizing high impedance amplifiers (Fig.2, Fig.7, col.16, lines 15-67, col.17, lines 1-67).

With respect to claim 16, De Champlain further teaches With respect to claim 16, De Champlain further teaches comprising:
a plurality of receiver radio frequencies devices (RRFs); wherein the receiving switch has N inputs and R outputs; wherein the N inputs are selectively connected to the directional antenna sectors (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 17, De Champlain further teaches wherein the R outputs are selectively connected to selected ones of the
plurality of the RRFs (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

WIth respect to claim 17, De Champlain further teaches wherein there are a plurality of receiving controllers, and wherein there axe a plurality, of the transmitting controllers, the system further comprising:
an RF switch, wherein selected ones of the receiving controllers are selectively coupled to selected ones of the directional antenna sectors utilizing the RF (radio frequency) swilch; and wherein selected ones of the transmitting controllers arc selectively coupled

to at least one of the directional antenna sectors utilizing the R_F switch (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

WIth respect to claim 18, De Champlain further teaches there is a plurality of the transmitting controllers, the system further comprising:a transmitting switch; and wherein selected ones of the transmitting controllers arc selectively coupled to at least one of the directional antenna sectors utilizing the transmitting switch (Fig.7, Fig.4, col.15, lines 1-67);

With respect to claim 19, De Champlain further teaches the transmitting switch is comprised of high impedance amplifiers (Fig.7, Fig.2, Fig.7, col.16, lines 15-67, col.17, lines 1-67).

With respect to claim 20, De Champlain further teaches a plurality of transmitter radio frequencies devices (TRFs); wherein the transmitting switch has T inputs and N outputs wherein the N outputs are selectively connected to the directional antenna sectors, and wherein the T inputs arc connected to selected ones of the plurality of the

TRFs ((Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 21, De Champlain further teaches wherein there arc a plurality of the receiving

controllers, and wherein each of the plurality of the receiving controllers is selectively coupled to selected ones of the directional antenna sectors in at least one of: a random order and a defined order for providing for measurement of the received electromagnet

signal characteristics (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 22, wherein there are a plurality of the receiving controllers, and wherein selected ones of the receiving controllers are selectively coupled to selected ones of the directional antenna sectors in at least one of the following patterns: reoccurring, one at a time, two at a time, three at a time, bisection, opposite directions, intersecting sets (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 23, wherein the received electromagnetic signal characteristics are provided as signals comprising control information and data information (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 24, wherein the control information is representative of at least one of: RSSI (received signal strength indicator), power, polarization, SNR (signal-to-noise-ratio), Doppler shift, packet source identification, transmitting identification, base station identification, access point identification, bit error-rate, phase-shift:, wherein the control information is processed to determine the received electro-magnetic characteristics (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 25, De Champlain further teaches wherein the received electromagnetic signal characteristics are determined by at least one of the following RSSI (received signal strength indicator) analysis, analog processing, digital

processing, analog filtering, digital filtering, FEC (forward error correction), bit error-rate analysis, time-of-day analysis, propagation delay analysis, transmitter address analysis, and transmitter identification analysis (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 26, De champlain further teaches wherein the control information is used by a selected one of the receiving controllers to select at least one of the plurality of directional antenna sectors (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 27, De Champlain further teaches an antenna control unit; and wherein the control information is used by the antenna control unit to select at least one of the plurality of directional antenna sectors(Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 28, De champlain further teaches wherein the directional antenna sectors are physically arranged into a shape having a plurality of facets, wherein each directional antenna sector transmits electromagnetic signals in a defined direction in three-dimensional space, and wherein the defined direction in three-dimensional space is at least one of: perpendicular to a polyhedron facet, perpendicular to a pyramid facet, perpendicular to a cube facet, a predefined angle with respect to a polyhedron facet, a predefined angle with respect to a pyramid facet, a predefined angle with respect to a cube facet, a predefined angle with respect to a octahedron facet, and a predefined angle with respect to a pentagondonecahedron facet (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 29, De Champlain further comprising: means for detecting an identication source of the received electromagnetic signal responsive to the control information wherein there is a plurality of the receiving controllers; wherein a selected one of the receiving controllers selects at least one of the directional antenna sectors prior to of at least one data packet and responsive to the received electromagnetic signal characteristics and the identification of the source of the received electromagnetic signal; wherein there are a plurality of the transmitting controllers and wherein a selected one of the transmitting controller is selectively coupled to at least one of the directional antenna sectors to transmit at least one data packet as selected by the selected one of the receiving controller (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 30, De champlain further teaches the identification source is at least one of: a wireless access point, a base station, a cellular phone base station, a mobile device, an 802.11 device, an 802.15, an 802.16 device, a laptop computer, a desktop computer, a personal digital assistance and a cellular phone (Fig.7).

With respect to claim 52, De Champlain further teaches the received electromagnetic signal characteristics are stored in a first buffer providing a memory for storage and the receiving controller selects responsive to the received electromagnetic signal characteristics as stored in the first buffer (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 31, De Champlain further teaches at least one of said transmitting controllers is selectively coupled; to at least one of the directional antenna

sectors for a first defined time interval for the transmission of at least one data packet responsive to the received electromagnetic signal characteristics stored in the first buffer (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 32, De champlain further teaches wherein at least one of the at least one said receiving controller is coupled to at least one of the directional antenna sectors for a second time interval for receiving of at least one data packet, responsive to the received electromagnetic signal characteristics stored in the first buffer (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 33, De champlain further teaches wherein the at least one said receiving controller is selectively coupled to the directional antenna sectors in a defined order responsive to the electromagnetic signal characteristics stored in the first buffer (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 34, De champlain further teaches wherein the at least one said receiving controller is selectively coupled to the directional antenna sectors in at least one of the following patterns, responsive to the electromagnetic signal characteristics stored in the first buffer as at least: one directional antenna sector at a time, two directional antenna sectors at a time, three directional antenna sectors at a time (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 35, De Champlain further teaches, further comprising: a wireless device contains at least one of: the plurality of antenna sectors, the receiving controller, the transmitting controller and the first buffer; and

an antenna system comprises at least one of: the plurality of directional antenna sectors, the at least one said receiving controller; the at least one said transmitting controller and the first buffer (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 36, De Champlain further teaches the wireless device and antenna system are coupled to each other by at least one of the following:a plurality of coax cables, a multi-lead coax cable, a parallel data connection, serial, data connection, a parallel data and control connection, a parallel data, a timing and control connection, a PCMCIA (personal computer memory card international association) interface, a USB (universal serial bus) interface, an IEEE 1394 (Fire-Wire) interface, an infra red (IR) interface, a free space optical laser interface, and a wireless interface. (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 37, De Champlain further teaches an access control unit for managing the transmitting and receiving of the data packets wherein the access control unit is part of at least one of the wireless device and the antenna system (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 38, De Champlain further teaches an antenna control unit for managing selection of the directional antenna sectors; wherein the antenna control unit is part of at least one of: the wireless device and the antenna system; and wherein

the antenna control unit processes the received electromagnetic signal characteristics stored in the first buffer to select at least one of the directional antenna sectors for the first predefined time interval for transmission of data packets (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 39, De Champlain further teaches wherein the antenna control unit performs parts of at least one of the following protocols: IEEE 802.11, IEEE 802.15, IEEE 802.16, CDMA 2000, WCDMA, UMTS, GPRS, 2.5G, 3G, 4G, 5G, and GSM (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 40, De Champlain further teaches wherein the wireless device is part of at least one of the following: a laptop computer, a personal computer, a personal digital assistant, a cellular phone, a 2.5G cellular phone, a 3G device, a 4G device, a consumer electronic game, a multimedia device, a videoconferencing system, a wireless packet audio system, a wireless video system, an electronic book, a home entertainment, a home entertainment system, electronic paper, a GPS (global positioning system) receiver, an automotive, a boat, a ship, an airplane, a trains, a satellite, a hand-held device, a base stations, a wireless access point, an access router an electronic scanner, a UAV (unmanned aerial vehicle), and a packet switch (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 41, De Champlain further comprising: at least one omni antenna, and wherein the at least one said omni antenna is coupled to at least one of the following: said at least one said receiving controller and said at least one said

transmitting controller (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 42, De Champlain further teaches wherein each of the directional sector antennas is selected from at least one of the following types: flat panel, parabolic dish, slotted, micro-strip, yagi, omni, and planar (Fig.3, col.13, lines 40-67, col.14, lines 1-67).

With respect to claim 43, De Champlain teaches A wireless method for transmitting and receiving a plurality of data packets, the method comprising: providing a plurality of directional antenna sectors in three-dimensional space (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);
selecting at least one of said plurality of directional antenna sectors to-for receiving and measuring received electromagnetic signal characteristics of an electromagnetic signal; coupling at least one of said selected directional antenna sectors to receive an electromagnetic signal (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67); and selecting at least one of said plurality of directional antenna sectors to transmit an electromagnetic signal at least one packet responsive to the measuring the received electromagnetic signal characteristics (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67);

With respect to claim 44, De Champlain further teaches utilizing steered directional antenna sectors to orient the directional antenna sectors (Fig.3, col.13, lines 40-67, col.14, lines 1-67).

With respect to claim 45, De Champlain further teaches arranging the directional antenna sectors in a defined physical pattern (Fig.3, col.13, lines 40-67, col.14, lines 1-67).

With respect to claim 46, De Champlain further teaches converting the electromagnetic signal to provide control information and data information (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67)

With respect to claim 47, De Champlain further teaches the control information is representative of at least one of the following: power, polarization, SNR, doppler shift, phase shift, packet source identification, transmitting identification, base station identification, access point identification ((Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67)

With respect to claim 48, De Champlain further teaches determining the electromagnetic signal characteristics by at least one of the following: analog processing, digital processing, analog filtering, digital filtering, FEC (forward error correction), bit error rate analysis, RSSI (received signal strength indicator) analysis, timing analysis, time-of-day analysis, propagation delay analysis, transmitter address analysis, communications channel analysis and transmitter identification analysis (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67)

With respect to claim 49, De Champlain further teaches communicating the electromagnetic signal via a plurality of channels (Fig.3).

With respect to claim 50, De Champlain further teaches selecting at least one of the plurality of channels responsive to define performance criteria (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67)

With respect to claim 51, De Champlain further teaches wherein the defined performance selection criteria is at least one of the following: analog processing, digital processing, analog filtering, digital filtering, FEC (forward error correction), bit error rate analysis, RSSI (received signal strength indicator) analysis, timing analysis, time-of-day analysis, propagation delay analysis, transmitter address analysis, communications channel analysis and transmitter identification analysis (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67).

With respect to claim 52, De Champlain further teaches the received electromagnetic signal characteristics are stored in a first buffer providing memory for storage and wherein the receiving controller selects responsive to the received electromagnetic signal characteristics as stored in the first buffer (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67).

With respect to claim 53, De Champlain further teaches transmitting the electromagnetic signal as transmitting signal in a defined region in space prior to transmitting of at least one data packet responsive to the electromagnetic signal characteristics ((Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67).

With respect to claim 54, De Champlain teaches A method for transmitting and receiving a plurality of data packets, the method comprising: transmitting and receiving

electromagnetic signals via a plurality of directionalantenna sectors each having a respective associated three-dimensional region of space ((Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67).measuring received electromagnetic signal characteristics via at least one of the directional antenna sectors (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67) selecting at least one of the directional antenna sectors as a selected directional antenna sector, responsive to the received electromagnetic signal characteristics; and transmitting at least one data packet via the selected directional antenna sector (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67)

With respect to claim 55, De Champlain further teaches wherein the measuring of the received electromagnetic signal characteristics is determined by at least one of the following: RSSI (received signal strength indicator) analysis, analog processing, digital processing, analog filtering, digital faltering, FEC (forward error correction), bit error-rate analysis, time-of-day analysis, propagation delay analysis, transmitter address analysis, and transmitter identification analysis (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67)

With respect to claim 56, Dechamplain further teaches physically arranging the directional antenna sectors into a shape having a plurality of facets, wherein each of the directional antenna sectors electromagnetic signals in a defined direction in three-dimensional space, and wherein the direction in three-dimensional space is at least one of: perpendicular to a polyhedron facet, perpendicular to a pyramid facet, perpendicular to a cube facet, a predefined angle with respect to a polyhedron facet, a predefined

angle with respect to a pyramid facet, a predefined angle with respect to a cube facet, a predefined angle with respect to a octahedron facet, and a predefined angle with respect to a pentagondonecahodron facet (Fig.7, Fig.2, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67).

With respect to claim 57, De champlain further teaches further comprising: detecting an identification source of the received electromagnetic signal responsive to control information; selecting at least one of the directional antenna sectors as a selected directional antenna sector, prior to transmission of at least responsive to the measuring of the received electromagnetic signal characteristics and the identification of the source of the received electromagnetic signal; and selectively coupling the selected directional antenna sectors to transmit at least one data packet and data packet and responsive to measuring of the received electromagnetic signal characteristics and the identification of the source of the received signal and selectivley coupling the selected directional antenna sectors to transmit at least one data packet (Fig.7, Fig.2, Fig.3, col.16, lines 15-67, col.17, lines 1-67, col.6, lines 5-67, col.7, lines 1-67).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMAR DAGLAWI whose telephone number is (571)270-1221. The examiner can normally be reached on Monday- Friday (7:30 AM- 5:00 AM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NGUYEN, DUC can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amar Daglawi
Examiner
Art Unit 2618

/Amar Daglawi/
Examiner, Art Unit 2618

/Duc Nguyen/

Supervisory Patent Examiner, Art Unit 2618

3.